REMARKS

Claims 1-19, and 22-24 have been amended. Claims 1-30 remain pending.

The Examiner rejected claims 1-30 under 35 U.S.C. §102(e) as being anticipated by Liva et al. (U.S. patent application 2002/0136203 A1). The Examiner has also rejected claim 19under 35 U.S.C. §103(a) as being unpatentable over Abe in view of Desai (US 5,781,703). Additionally, claims 33 and 34 are rejected under 35 U.S.C. §103(a) as being unpatentable over Abe. The Examiner's rejections are respectfully traversed as follows.

Claim 1 is directed towards a "packet fiber node for use in an access network, the access network including a Head End and a plurality of nodes." The packet fiber node includes "at least one processor, memory, a first interface for communicating with the Head End, and a second interface for communicating with at least a portion of the plurality of network nodes." Claim 1 further requires "the packet fiber node being configured or designed to communicate with the Head End using baseband optical signals that are received at the packet fiber node from the Head End and transmitted to the Head End by the packet fiber node. Claim 10 is directed towards a packet fiber node and recites "a distributed cable modem termination system (DCMTS)" that is "operable to communicate with the Head End using baseband optical signals that are received at the packet fiber node from the Head End and transmitted to the Head End by the packet fiber node." Claim 23 includes means for "communicating with the Head End using baseband optical signals that are received at the packet fiber node from the Head End and transmitted to the Head End by the packet fiber node." In other words the fiber node has bidirectional communication using baseband optical signals. Embodiments of the present invention provide increased bandwidth to thereby allow richer data transmission between the Head End and cable modems, for example.

Although the reference Liva appears to teach the use of baseband by a fiber node, Liva fails to teach bidirectional use of baseband optical signals by a fiber node in communication with a Head End. See Abstract (emphasis added): "For HFCN channels containing signals with modulation or encoding schemes that are unknown or best processed upstream, the invention also provides for tunneling their spectrum over the same packet network as used for the cable modem data. The channels to be tunneled are isolated using digital receivers, translated to baseband, their data framed, merged with cable modem subscriber data, and transmitted over the packet network. Upstream, the framed channel data is parsed and the original channel spectrum reconstructed to permit information recovery." Liva appears to only disclose the use of baseband in the context of transmitting upstream from the fiber node to the Head End and not for receiving baseband into the fiber node from the Head End. See Page 2, Paragraph 20; Page 3, Paragraph 25; Page 6, Paragraph 98; and Page 7, Paragraph 114-115. In sum, Liva fails to teach

or suggest mechanisms for a fiber node to communicate with the Head End using baseband optical signals that are received at the packet fiber node from the Head End and transmitted to the Head End by the packet fiber node, in the manner claimed. Accordingy, it is respectfully submitted that claims 1, 10, and 23 are patentable over Liva.

Claim 19 is directed towards a "method for performing communication in a cable network." Claim 19 also recites that "the cable network including a Head End which communicates with a plurality of different cable modem groups using at least one upstream channel and at least one downstream channel." Claim 19 also requires "using a same channel frequency to communicate with at least two different cable modem groups which are serviced by a common RF fiber node." The Examiner cites Liva at Page 1, Paragraph 6 and Page 5, Paragrahp 75-76 at teaching this limitation. Although communicating with different cable modem groups is disclosed, it is respectfully submitted that Liva fails to teach or suggesting using a same channel frequency to communicate with the different cable modem groups, in the manner claimed. Thus, it is submitted that claim 19 is patentable over Liva.

The Examiner's rejections of the dependent claims are also respectfully traversed. However, to expedite prosecution, all of these claims will not be argued separately. Claims 2-9, 11-18, 20-22, and 24-30 each depend directly or indirectly from independent claims 1, 10, 19, or 23 and, therefore, are respectfully submitted to be patentable over cited art for at least the reasons set forth above with respect to claims 1, 10, 19, or 23. Further, the dependent claims require additional elements that when considered in context of the claimed inventions further patentably distinguish the invention from the cited art. For example, claim 20 explicitly recites transmitting two different data portions to two different cable modem groups using a same channel frequency. The cited references fail to teach or suggest such limitations.

Applicant believes that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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